

## CLAIMS

1. An antenna array (1) for operation in two ranges of application (29,31) comprising a first and second antenna (3,5) with which the positions of the resonant frequencies are different from each other, while these resonant frequencies lie between the two ranges of application (29,31).

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2. An antenna array as claimed in claim 1, characterized in that the transmission in the ranges of application (29, 31) lies in the range from -20dB to -4dB.

3. An antenna array as claimed in claim 1, characterized in that the transmission in the ranges of application (29, 31) lies in the range from -20dB to -6dB.

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4. An antenna array as claimed in claim 1, characterized in that the transmission in the ranges of application (29, 31) lies in the range from -20dB to -10dB.

5. An antenna array as claimed in claim 1, characterized in that the two ranges of application (29, 31) have a distance of less than 200MHz.

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6. An antenna array as claimed in claim 1 or 2, characterized in that the reflection of both antennas (3,5) within the respective ranges of application is less than -2dB.

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7. An antenna array, comprising a first (3) and a second antenna (5), which are arranged parallel to each other.

8. An antenna array as claimed in claim 1 or 7, comprising a first antenna (3) and a second antenna (5) and a driver circuit (21) comprising a power splitter (25) and preferably a variable phase shifter (23).

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9. An antenna array as claimed in claim 1 or 7, characterized in that the first (3) and the second antenna (5) are dielectric block antennas (7).

10. An antenna array as claimed in claim 1 or 7, characterized in that the first (3) and the second antenna (5) are arranged as surface mounted devices on a surface of a printed circuit board (19).

11. An antenna array as claimed in claim 1 or 7, characterized in that the the antennas (3,5) are mounted at a distance of maximum 10 cm and minimum of 2 cm from each other.

12. A telecommunication device comprising an antenna array (1) in accordance with one of the preceding claims.

13. A method for the operation of an antenna array in accordance with one of the preceding claims, wherein both antennas (3,5) can be operated at the same time and a division of the power that is supplied to the respective antennas (3,5) is executed by means of a power splitter (25).

14. A method for the operation of an antenna array (1) in accordance with one of the preceding array claims wherein the two antennas (3,5) are operated with phase offset depending upon the desired radiation pattern.

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